

9.0 LAND USE

Many airports and local communities have extensive and complex economic interrelationships. Airports often serve as a development catalyst, attracting industrial and commercial activity to airport environs. These businesses may be service-oriented support industries for aircraft, cargo, or passenger activity or may be dependent on the airport as a provider of transportation services. In addition, the community growth pattern may be affected by the presence of airports which often require extensive land areas for runways, taxiways, terminals, clear zones, etc. The on-airport and off-airport land use relationships are important considerations with regard to future airport needs and community development and growth patterns. As a result, these land use relationships have been investigated for airport-related land requirements and for the compatibility of airport activity with adjacent land uses.

The Airport Layout Plan (ALP) identifies existing and planned airport facilities. One element of the ALP is the Land Use Plan for airport property. The Land Use Plan for Avi Sequilla was developed and based on the projected needs of the Airport through the year 2005 and existing land use patterns and infrastructure.

Off-Airport land uses were also evaluated to determine their compatibility with the Airport, particularly with respect to aircraft noise generation and obstructions to air navigation. The evaluation was based on existing conditions, projected Airport facilities and aircraft activity for the year 2005.

9.1 ON-AIRPORT LAND USE

Avi Suquilla Airport is located east of the Town of Parker on 255.1 acres of land leased to the Town of Parker from CRIT. The present airport property boundaries encompass all Airport-related improvements and include 17.5 acres north of State Highway 95 and 31.9 acres east of Runway 01/19 presently utilized for agricultural production. The Town

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of Parker's eastern boundary lies approximately 1,700 feet east of the south end of Runway 01/19 (see Figure 9-1).

9.1.1 Existing Land Use

The Airport property is presently classified into several different land uses (see Figure 9-2), the most prominent being Airport related. The prime function of this use is to serve the Airport and provide space and access for aviation-dependent businesses. Other land uses present on the Airport property include surface transportation, and vacant land.

Airport Related--Airport-related land use is designed to accommodate airport facilities as well as commercial activities providing services supportive to the airport. This designation is also designed to accommodate airport-related commercial and industrial development which conforms to performance standards and site plan review criteria encouraged by FAA. The Airport-related area of Avi Suquilla Airport incorporates approximately 192.9 acres (see Figure 9-2) and consists primarily of:

- Runway 01/19 and taxiway system,
- CRIT Air,
- Airport-related buildings and facilities, including T-hangars, fuel area, long-term parking area, and a vacant building,
- Clear zones,
- Vacant land between the runways and taxiways, and
- Vacant land between the building restriction lines and the runway or taxiway.

An agricultural area east of the runway is also located within the Airport-related area. Situated between a security fence and the east property line (Building Restriction Line), the agricultural land consists of 31.9 acres.

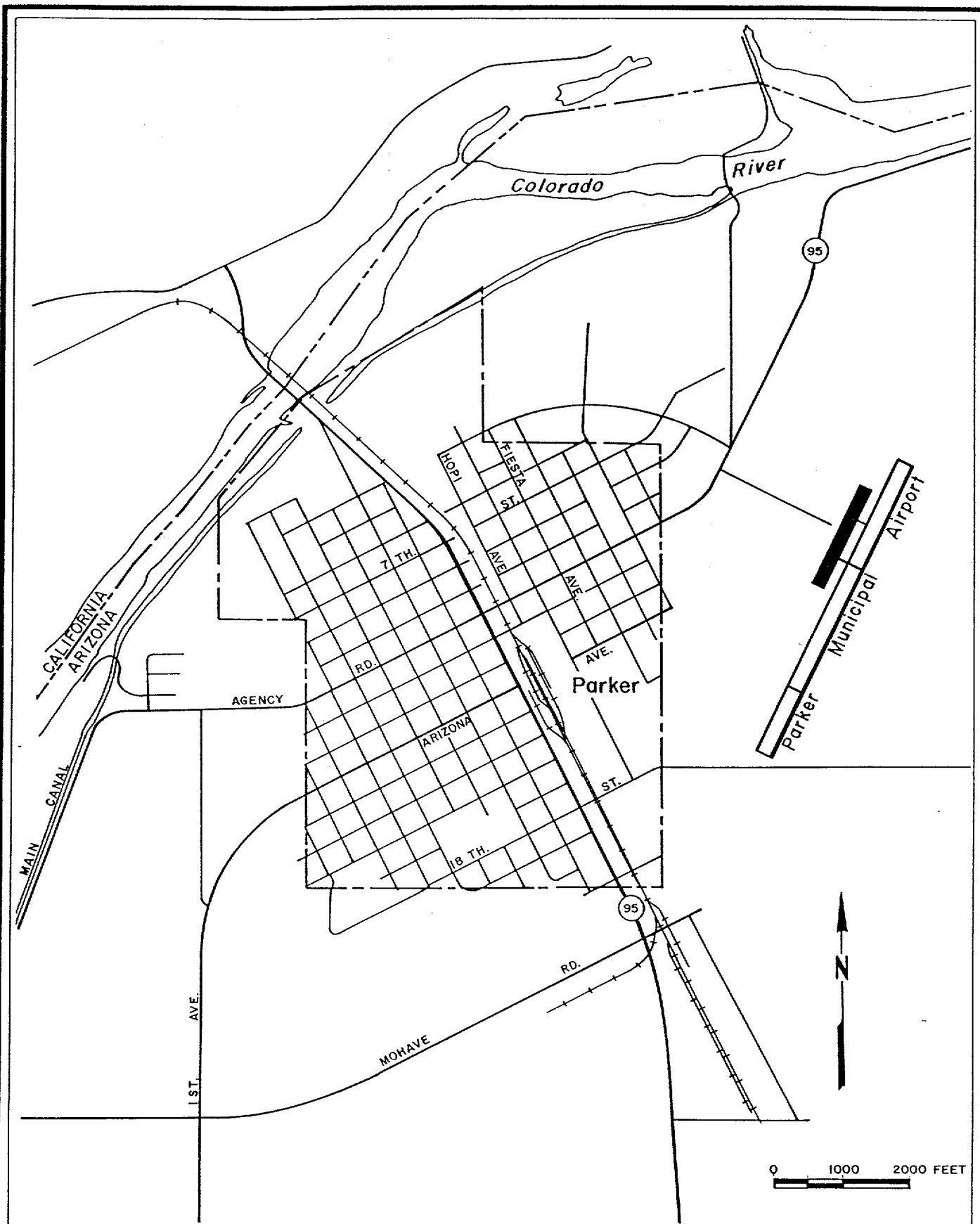


Figure 9-1
VICINITY MAP

SOURCE: USGS, 1978.

AVI SUQUILLA
AIRPORT MASTER PLAN

Figure 9-2
Existing Land Use

(To be included in final report)

Surface Transportation--The Airport property is accessed by State Highway 95. Surface transportation land on Airport property accounts for 2.7 acres of State Highway 95, which bisects the northern portion of the Airport property.

Vacant Land--Vacant land includes land located outside clear zones and building restriction or taxiway setback lines. Acreage within these areas have been designated Airport related. Vacant land totals 59.5 acres of Airport property located east and west of the runway and north of the clear zone.

9.1.2 Proposed Land Use

Based on Airport traffic projections, improvements have been recommended to the existing Airport facilities which will result in several operational changes at the Airport. Direct Airport service, indirect support activity, and other adjacent activities were evaluated to determine appropriate land use requirements and relationships. The results of this analysis consist of a Land Use Plan which is presented in Figure 9-3 and is described by land use classification.

Airport Related--Approximately 230.4 acres is associated with Airport operations and aviation activity (Airport use), representing an increase of 37.5 acres over existing use. In accordance with the ALP, additions to Airport facilities are proposed, including expanding the long-term parking area. Additional T-hangars are also being proposed adjacent to existing buildings west of Runway 01/19. The ALP set depicts this Airport-related development. No development should occur within the building restriction lines or clear zones; these areas will remain undeveloped land. The Airport-related designation also includes the agricultural area east of Runway 01/19 and the vacant land north of the north clear zone, which should remain undeveloped and be used as a buffer area.

Industrial--A site designated for light industrial use is proposed for Airport property south of the future T-hangar area and west of the BRL.

Figure 9-3
Land Use Plan
(To be included in final report)

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The industrial site is comprised of 13.2 acres and could be considered for aviation-related industrial use because of direct accessibility to the taxiways. Aviation-related industrial use requires access to taxiways as part of the inherent function of the industrial facility (need for aircraft to access the facility). These types of uses would include airplane manufacturing, flight training facilities, maintenance, and medical air transportation.

Commercial/Services--Approximately 8.8 acres of on-Airport property are being proposed for highway commercial usage. Highway commercial-designated areas provide for a wide range of personal and professional services, and wholesale and retail sales to Airport patrons and the surrounding community. Airport properties that are designated highway commercial are located adjacent to State Highway 95 to provide for mandatory exposure to local and tourism-related traffic.

Surface Transportation

The surface transportation network identified on the ALP reflects existing road alignments. State Highway 95 and Airport Road are expected to remain as the main access roads to the Airport.

An on-Airport access road (shown as aviation-related) will provide surface transportation access to the highway commercial and industrial sites south of State Highway 95 as well as individual existing and proposed Airport facilities.

9.1.3 Conclusions and Recommendations

Increasing the extent of Airport-related, commercial, and industrial land uses at Avi Suquilla Airport as suggested by the proposed Land Use Plan will allow CRIT or the Town of Parker to better utilize the Airport as a valuable community resource. Additional growth on Airport property and adjacent areas can and should be compatible with the existing land use activities, public utilities, and the existing road network. The increased commercial and industrial activity will encourage new

investment opportunities adjacent to the Airport and result in expansion and diversification of the tax base for Parker and LaPaz County as well as increase CRIT lease revenues.

9.2 CTF-AIRPORT LAND USE

9.2.1 Land Use in the Airport Vicinity

Avi Suquilla Airport is located east of the Town of Parker within CRIT's land in LaPaz County (see Figure 9-1). The majority of developed land is situated within or adjacent to Parker or along the Colorado River.

Existing land use patterns indicate a concentration of commercial land use along State Highway 95 and the California Avenue approach to the river. Local government institutional land uses are located along Arizona Avenue while schools are located in south central Parker. A concentration of industrial activity occurs along State Highway 95 south of 11th Street in the vicinity of the Atchison Topeka and Santa Fe Railway. Major residential areas are located along the river and in west and southwest portions of Parker.

Most of the development is located in Parker; although in recent years, commercial uses have been developed along State Highway 95 south and east of Parker. Substantial agricultural land use occurs primarily east and south of Parker.

Land uses adjacent to Avi Suquilla Airport consist of vacant land immediately north, south, and west of Airport boundaries and agricultural land east of the Airport. The nearest developed areas include a cemetery and a shopping center 1,700 feet south and west of the Airport runway, respectively. The closest residential area is located 2,200 feet west of the runway.

9.2.2 Land Use Compatibility

According to FAR Part 150 (Airport Noise Compatibility Planning) all land uses are normally compatible with aircraft noise levels less than a yearly day-night average sound level (Ldn) of 65. When noise levels exceed 65 Ldn, certain sensitive land uses, including residences, churches, and schools may become incompatible. Manufacturing and production activities are more tolerant of higher noise levels, but can become incompatible when high Ldn's are exceeded (approximately 80-85 Ldn).

To determine the impact of aviation-related noise to off-Airport land use, noise exposure maps were developed. Utilizing both the aircraft traffic projections and Airport facility improvement alternatives, as described in previous sections, and FAA's Integrated Noise Model (INM) Version 3.8, noise exposures were determined for 1985 and the year 2005 (see Figures 9-4 and 9-5). The exposure maps identified areas subjected to 65, 70, and 75 Ldn. Higher noise levels do not occur at Avi Suquilla Airport nor are they anticipated in the future.

Typically, land uses subjected to noise levels greater than 65 Ldn are inventoried and identified according to the Standard Land Use Coding Manual (SLUCM) which was developed by the U.S. Department of Housing and Urban Development and the Federal Highway Administration. Land use compatibility is then determined as defined by FAR Part 150, which identifies the procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs. FAR Part 150 identifies the compatibility of general land use types when subjected to Ldn greater than 65 (see Table 9-1).

As depicted in Figures 9-4 and 9-5, all land uses subjected to noise levels greater than 65 Ldn for the years 1985 and 2005 are located within the Airport boundaries and thus do not affect land uses off airport property. The contours also remain within the BRL. As a result, the light industrial or highway commercial sites on-Airport also

Figure 9-4
1985 Noise Contours
(To be included in final report)

Figure 9-5
Year 2005 Noise Contours
(To be included in final report)

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Table 9-1. Land Use Compatibility With Yearly Day-Night Average Sound Levels

Land Use*	Yearly Day-Night Average Sound Level (Ldn) in Decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
<u>Residential</u>						
Residential, other than mobile homes and transient loadings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
<u>Public Use</u>						
Schools, hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
<u>Commercial Use</u>						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade--general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
<u>Manufacturing and Production</u>						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photograph and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
<u>Recreation</u>						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

(Numbers in parentheses refer to notes.)

* The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable or unacceptable under federal, state or local law. The responsibility for determining the acceptable and permissible land uses remains with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

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Table 9-1. Land Use Compatibility with Yearly Day-Night Average Sound Levels (Continued, Page 2 OF 2)

KEY TO TABLE 9-1

Y-(Yes)--Land Use and related structures compatible without restrictions.

N (No)--Land Use and related structures are not compatible and should be prohibited.

NLR--Noise Level Reduction (outdoor or indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35--Land use and related structures generally compatible; measures to achieve NLR, or 25, 30, or 35 must be incorporated into design and construction of structure.

NOTES FOR TABLE 9-1

1. Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
 2. Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
 3. Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
 4. Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
 5. Land use compatible provided special sound reinforcement systems are installed.
 6. Residential buildings require an NLR of 25.
 7. Residential buildings require an NLR of 30.
 8. Residential buildings not permitted.
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are not subjected to adverse noise conditions. Although noise complaints may occur as a result of isolated incidences, the overall noise level at Avi Suquilla is not considered a problem under FAR Part 150 Rules.

Land use compatibility problems also arise when tall manmade structures--buildings, radio towers, smoke-stacks--are located in close proximity to an airport. A review of the heights of structures under Part 77 rules indicates that there are presently no obstructions to navigation.

9.3 CONCLUSIONS AND RECOMMENDATIONS

Aircraft utilizing Avi Suquilla Airport will not subject off-Airport property to sound levels greater than 65 Ldn through the year 2005.

Agricultural activity may continue adjacent to the airport as long as the crops grown are not attractive to large numbers of birds. Vacant land between the Airport and Parker can be developed without restrictions due to generation of aircraft noise. Commercial development is likely along State Highway 95 and will be compatible with Airport operations. Industrial activity is also encouraged, especially east of the industrial district in the Town of Parker, since this area is the closest point between the Airport and Parker.

To regulate the height of future development in the vicinity of Avi Suquilla Airport, a height restrictions ordinance should be adopted. The ordinance should reflect the Part 77 surfaces as identified in this plan.